

### REMARKS

Claims 9-17 are pending. Claims 9, 10, 13, and 15 have been amended. In particular, claims 9 and 13 have been amended to clarify the antibody intended by the name "PM-1". Support for this change is found on pages 10-11 of the present specification. In addition, claims 10 and 15 have been amended to conform with changes in the independent claims. The specification has been amended as requested by the Examiner. No new matter has been introduced.

A sequence listing is submitted herewith.

The specification has been amended to introduce the claims as requested by the Examiner.

The objection to claim 13 has been overcome by changing "the" to "a".

Claims 9-17 have been rejected under the judicially created doctrine of double patenting. Without acquiescing in the correctness of the rejection, a terminal disclaimer is submitted herewith. Accordingly, withdrawal of the rejection is requested.

Claims 9-17 have been rejected under the first paragraph of 35 U.S.C. 112 for failure to comply with the deposit requirements. A deposit declaration is submitted herewith, and the specification has been amended to refer to the deposited hybridoma. Accordingly, withdrawal of the rejection is requested.

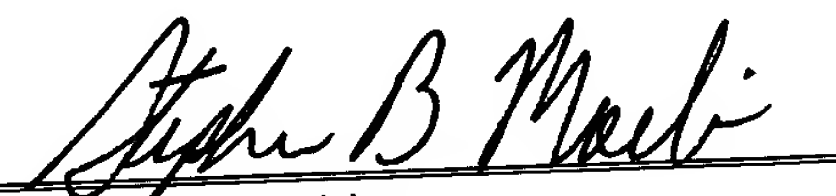
Claims 9-17 have been rejected under the second paragraph of 35 U.S.C. 112 for indefiniteness. The claims have been amended to clarify the "PM-1" antibody based on pages 10-11 of the present specification. Accordingly, withdrawal of the rejection is requested.

In accordance with the foregoing, favorable reconsideration and allowance of the application are requested. In the event that any issues remain, the Examiner is invited to telephone the undersigned with any proposal to expedite prosecution.

Respectfully submitted,

Date: September 20, 2001

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**MARKED UP VERSION OF CHANGES**

Marked up version of paragraph at page 6, lines 19-29:

Examples of such antibodies which are IL-6 antibodies include MH166 (Matsuda et al., Eur. J. Immunol. 18:951-956, 1988) and SK2 antibody (Sato et al., Journal for the 21<sup>st</sup> General Meeting of the Japan Immunology Association, 21:116, 1991). Examples of IL-6R antibodies include PM-1 antibody (deposited on July 12, 1989 at the Patent and Bio-Resource Center, National Institute of Advanced Industrial Science and Technology, Chuo No. 6, 1-1, Higashi 1 chome Tsukuba-shi, Ibaraki-ken 305-5466, Japan, as FERM BP-2998) (Hirata et al., J. Immunol. 143:2900-2906, 1989), AUK12-20 antibody, AUK64-7 antibody and AUK146-15 antibody (Intl. Unexamined Patent Application No. WO92-19759). An example of gp130 antibody is AM64 antibody (Japanese Unexamined patent Publication No. 3-219894).

Marked up version of the amended claims:

9. **(Amended)** A method for inhibiting synovial cell growth, comprising administering to a patient in need thereof a pharmaceutical composition comprising [a monoclonal] an antibody [PM-1] including a complementary determinant region of an antibody produced by FERM BP-2998 hybridoma and a physiologically acceptable carrier.

10. **(Amended)** The method according to claim 9, wherein the antibody is a humanized antibody [PM-1].

13. **(Amended)** A method of treating chronic rheumatoid arthritis, comprising administering to a patient in need thereof a pharmaceutical composition comprising [a monoclonal] an antibody [PM-1] including a complementary determinant region of an antibody produced by FERM BP-2998 hybridoma and a physiologically acceptable carrier.

15. **(Amended)** The method according to claim 13, wherein the antibody is a humanized antibody [PM-1].

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Tadamitsu KISHIMOTO, et al.

Title: CHRONIC RHEUMATOID ARTHRITIS THERAPY CONTAINING  
IL-6 ANTAGONIST AS EFFECTIVE COMPONENT

Appl. No.: 09/756,125

Filing Date: 01/09/2001

Examiner: F. Pierre VanderVegt, Ph.D.

Art Unit: 1644



**AMENDMENT IN RESPONSE TO NOTICE UNDER §§ 1.821-825**

TECH CENTER 1600/2900

SEP 25 2001

RECEIVED

Commissioner for Patents  
Attn: Box Sequence  
Washington, D.C. 20231

Sir:

In response to the Notice to Comply with Requirements for Applications  
Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures as specified  
in the Office Action mailed on March 20, 2001, please amend the application as  
follows:

**In the Specification:**

Please amend the specification as follows:

At page 14, lines 20-29 please replace with the following new paragraph:

The aforementioned plasmid pBSF2R.236 was digested with restriction  
enzyme SphI to obtain an IL6R cDNA fragment which was then inserted into mp18  
(Amersham Co.). The synthetic oligoprimers (SEQ ID NO: 1)  
ATATTCTCTAGAGAGATTCT designed for introduction of a stop codon in IL-6R cDNA  
was used to introduce a mutation in the IL-6R cDNA by the PCR method using an Invitro

BP  
cont.  
Mutagenesis System (Amersham Co.). This procedure resulted in introduction of a stop codon at the position of amino acid 345 to obtain cDNA coding for soluble IL-6R (sIL-6R).

Applicant has enclosed with this amendment a Petition for Extension of Time to make this response timely.

**REMARKS**

Applicants submit this Amendment to indicate the insertion point for the Sequence Listing filed concurrently herewith. Applicants respectfully request examination on the merits of this application.

Respectfully submitted,

Date

Sept. 20, 2001

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**MARKED UP VERSION**

Marked up version of page 14, lines 20-29:

The aforementioned plasmid pBSF2R.236 was digested with restriction enzyme SphI to obtain an IL6R cDNA fragment which was then inserted into mp18 (Amersham Co.). The synthetic oligoprimer (SEQ ID NO: 1) ATATTCTCTAGAGAGATTCT designed for introduction of a stop codon in IL-6R cDNA was used to introduce a mutation in the IL-6R cDNA by the PCR method using an Invitro Mutagenesis System (Amersham Co.). This procedure resulted in introduction of a stop codon at the position of amino acid 345 to obtain cDNA coding for soluble IL-6R (sIL-6R).